

Texas Water Development Board



Water *Conditions*

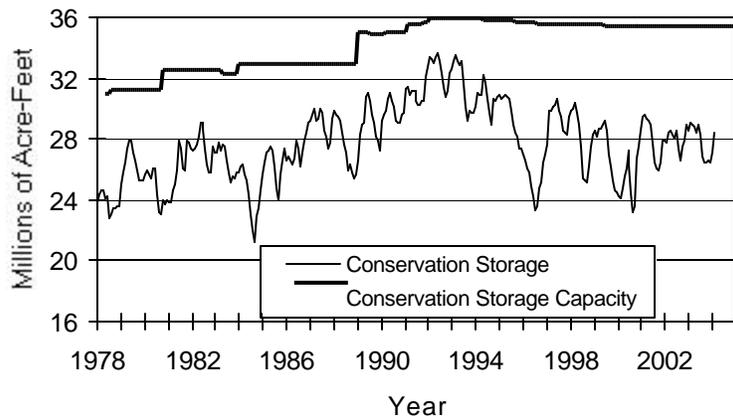
RESERVOIR STORAGE

February 2004

Near the end of February, the 77 reservoirs monitored for this report held 28.43 million acre-feet in conservation storage, or 82.5 percent of the conservation storage capacity of the state's major reservoirs. Statewide total storage is below normal for this time of year. Storage increased during the month by 1.28 million acre-feet (3.7% of conservation storage capacity). Compared to the previous year, storage is less, down 0.69 million acre-feet (-2.0%).

Storage is near capacity in the Upper Coast Region (99.4%), East Region (99.2%) and South Central Region (90%), while the High Plains (23.3%) and Trans-Pecos (18.4%) Regions remained lower than one-third. Storage is at 100% in 20 reservoirs. Compared to this time last year, the Edwards Plateau had the largest increase in storage (+10%), while the Low Rolling Plains Region had the steepest decline (-10.1%).

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



Current data are based on elevation near end of month at 77 reservoirs that represent 98 percent of total conservation storage capacity in Texas reservoirs having a capacity of 5,000 acre-feet or more.

STREAMFLOW

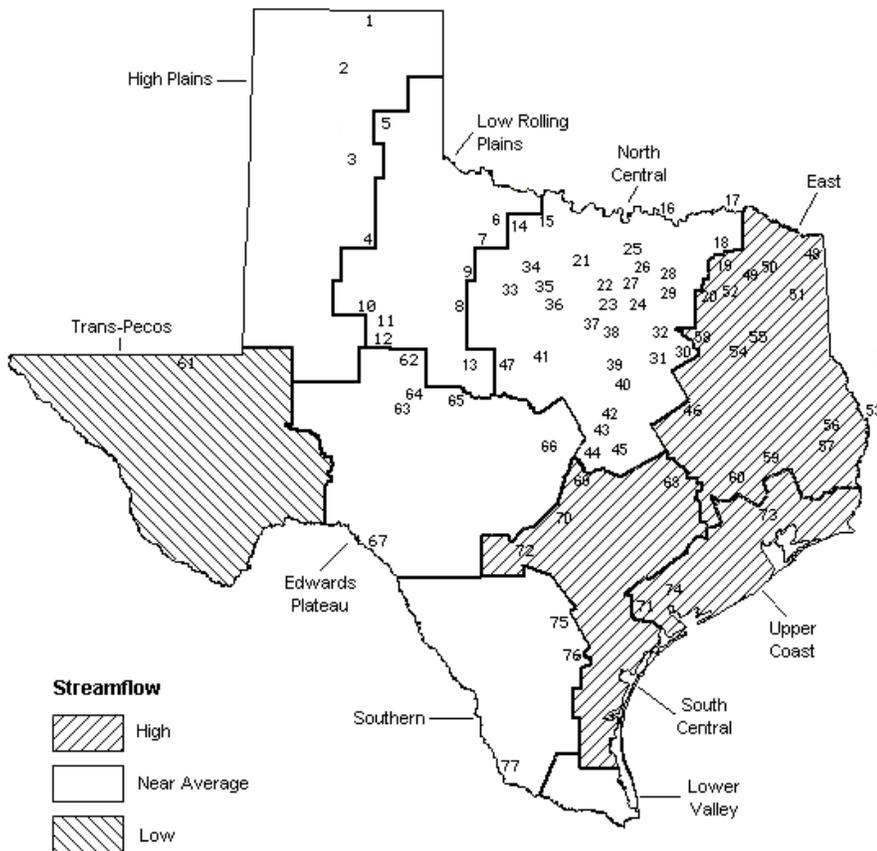
Of 29 reporting index stations in February, computed 31-day mean flows were very high (0-5% exceedance) at 2 stations, high (5% - 30% exceedance) at 10 stations, near normal (30% - 70% exceedance) at 15 stations, and low (70% - 95% exceedance) at 2 stations. In comparison to January, flows increased at 25 index stations, and decreased at 4.

On a regional basis, flows in February were low in the Trans-Pecos Region, high in Upper Coast, South Central and East Texas Regions, and near normal everywhere else.

FEBRUARY STREAMFLOW CONDITIONS

Reservoirs Shown on Map

- | | |
|----------------------------------|-----------------------------|
| 1. Palo Duro Reservoir | 40. Waco Lake |
| 2. Lake Meredith | 41. Proctor Lake |
| 3. MacKenzie Reservoir | 42. Belton Lake |
| 4. White River Lake | 43. Stillhouse Hollow Lake |
| 5. Greenbelt Reservoir | 44. Lake Georgetown |
| 6. Lake Kemp | 45. Granger Lake |
| 7. Miller's Creek Reservoir | 46. Lake Limestone |
| 8. Fort Phantom Hill Reservoir | 47. Lake Brownwood |
| 9. Lake Stamford | 48. Wright Patman Lake |
| 10. Lake J. B. Thomas | 49. Lake Cypress Springs |
| 11. Lake Colorado City | 50. Lake Bob Sandlin |
| 12. Champion Creek Reservoir | 51. Lake O' the Pines |
| 13. Hords Creek Lake | 52. Lake Fork Reservoir |
| 14. Lake Kickapoo | 53. Toledo Bend Reservoir |
| 15. Lake Arrowhead | 54. Lake Palestine |
| 16. Lake Texoma | 55. Lake Tyler |
| 17. Pat Mayse Lake | 56. Sam Rayburn Reservoir |
| 18. Cooper Lake | 57. B. A. Steinhagen Lake |
| 19. Lake Sulphur Springs | 58. Cedar Creek Reservoir |
| 20. Lake Tawakoni | 59. Lake Livingston |
| 21. Bridgeport Reservoir | 60. Lake Conroe |
| 22. Eagle Mountain Reservoir | 61. Red Bluff Reservoir |
| 23. Benbrook Lake | 62. E. V. Spence Reservoir |
| 24. Joe Pool Lake | 63. Twin Buttes Reservoir |
| 25. Ray Roberts Lake | 64. O. C. Fisher Lake |
| 26. Lewisville Lake | 65. O. H. Ivie Reservoir |
| 27. Grapevine Lake | 66. Lake Buchanan |
| 28. Lavon Lake | 67. Intl. Amistad Reservoir |
| 29. Lake Ray Hubbard | 68. Somerville Lake |
| 30. Richland-Chambers Creek Lake | 69. Lake Travis |
| 31. Navarro Mills Lake | 70. Canyon Lake |
| 32. Bardwell Lake | 71. Coletto Creek Reservoir |
| 33. Hubbard Creek Reservoir | 72. Medina Lake |
| 34. Lake Graham | 73. Lake Houston |
| 35. Possum Kingdom Lake | 74. Lake Texana |
| 36. Lake Palo Pinto | 75. Choke Canyon Reservoir |
| 37. Lake Granbury | 76. Lake Corpus Christi |
| 38. Lake Pat Cleburne | 77. Intl. Falcon Reservoir |
| 39. Whitney Lake | |



CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

| Name of Lake or Reservoir | No. on Map | Conservation Storage Capacity (acre-feet) | Conservation Storage Late Feb. 2004 (acre-feet) | (%) | Change since Late January 2004 (acre-feet) | (%) | Change since Late February 2003 (acre-feet) | (%) |
|---------------------------------------|------------------|--|--|-----|---|-----|--|-----|
| HIGH PLAINS | | | | | | | | |
| Palo Duro Reservoir | 1 | 60,900 | 2,560 | 4 | -130 | 0 | -700 | -1 |
| Lake Meredith (Texas) | 2 | 500,000 | 134,360 | 27 | -1,580 | 0 | -56,580 | -11 |
| Lake Meredith (Texas and Oklahoma) | (2) | 779,560 | 134,360 | 17 | -1,580 | 0 | -56,580 | -7 |
| MacKenzie Reservoir | 3 | 46,250 | 6,250 | 14 | 480 | 1 | -1,550 | -3 |
| White River Lake | 4 | 31,850 | 5,490 | 17 | -50 | 0 | -100 | 0 |
| TOTAL | | 639,000 | 148,660 | 23 | -1,280 | 0 | -58,930 | -9 |
| LOW ROLLING PLAINS | | | | | | | | |
| Greenbelt Reservoir | 5 | 58,200 | 24,170 | 42 | 300 | 1 | 560 | 1 |
| Lake Kemp | 6 | 319,600 | 175,710 | 55 | 6,470 | 2 | -64,240 | -20 |
| Miller's Creek Reservoir | 7 | 27,890 | 12,000 | 43 | 60 | 0 | -2,740 | -10 |
| Fort Phantom Hill Reservoir | 8 | 70,030 | 28,810 | 41 | 630 | 1 | -12,770 | -18 |
| Lake Stamford | 9 | 52,700 | 31,260 | 59 | 290 | 1 | -7,630 | -14 |
| Lake J. B. Thomas | 10 | 202,300 | 20,020 | 10 | -640 | 0 | 60 | 0 |
| Lake Colorado City | 11 | 30,800 | 20,120 | 65 | 10 | 0 | 3,990 | 13 |
| Champion Creek Reservoir | 12 | 41,600 | 3,420 | 8 | 60 | 0 | 1,190 | 3 |
| Hords Creek Lake | 13 | 8,600 | 2,370 | 28 | 0 | 0 | -10 | 0 |
| TOTAL | | 811,720 | 317,880 | 39 | 7,180 | 1 | -81,590 | -10 |
| NORTH CENTRAL | | | | | | | | |
| Lake Kickapoo | 14 | 106,000 | 61,340 | 58 | 2,340 | 2 | -16,720 | -16 |
| Lake Arrowhead | 15 | 262,100 | 121,280 | 46 | 4,140 | 2 | -30,750 | -12 |
| Lake Texoma | 16 | 2,722,300 | 2,121,040 | 78 | -19,880 | -1 | -185,080 | -7 |
| Pat Mayse Lake | 17 | 124,500 | 111,140 | 89 | 6,080 | 5 | -12,790 | -10 |
| Cooper Lake | 18 | 273,000 | 221,810 | 81 | 15,280 | 6 | -51,190 | -19 |
| Lake Sulphur Springs | 19 | 17,710 | 17,710 | 100 | 2,110 | 12 | 0 | 0 |
| Lake Tawakoni | 20 | 936,200 | 825,300 | 88 | 43,200 | 5 | -96,700 | -10 |
| Bridgeport Reservoir | 21 | 374,830 | 223,000 | 59 | 1,200 | 0 | -56,100 | -15 |
| Eagle Mountain Reservoir | 22 | 178,380 | 145,000 | 81 | 6,000 | 3 | 0 | 0 |
| Benbrook Lake | 23 | 88,200 | 87,260 | 99 | 6,180 | 7 | -680 | -1 |
| Joe Pool Lake | 24 | 175,800 | 175,800 | 100 | 0 | 0 | 0 | 0 |
| Ray Roberts Lake | 25 | 798,760 | 729,810 | 91 | 8,640 | 1 | -68,950 | -9 |
| Lewisville Lake | 26 | 555,000 | 535,700 | 97 | 22,210 | 4 | -19,300 | -3 |
| Grapevine Lake | 27 | 187,700 | 155,150 | 83 | 6,690 | 4 | -30,880 | -16 |
| Lavon Lake | 28 | 443,800 | 379,870 | 86 | 30,970 | 7 | -63,930 | -14 |
| Lake Ray Hubbard | 29 | 413,420 | 374,300 | 91 | 21,600 | 5 | -39,120 | -9 |
| Richland-Chambers Creek Lake | 30 | 1,103,820 | 1,102,000 | 100 | 78,000 | 7 | -1,820 | 0 |
| Navarro Mills Lake | 31 | 55,810 | 55,810 | 100 | 390 | 1 | 0 | 0 |
| Bardwell Lake | 32 | 53,580 | 51,010 | 95 | 2,830 | 5 | -2,570 | -5 |
| Hubbard Creek Reservoir | 33 | 317,800 | 123,870 | 39 | 3,190 | 1 | -24,930 | -8 |
| Lake Graham | 34 | 45,000 | 22,140 | 49 | 200 | 0 | -6,910 | -15 |
| Possum Kingdom Lake | 35 | 551,820 | 417,100 | 76 | 6,500 | 1 | -55,300 | -10 |
| Lake Palo Pinto | 36 | 27,650 | 17,650 | 64 | 4,830 | 17 | -4,420 | -16 |
| Lake Granbury | 37 | 135,680 | 133,800 | 99 | 700 | 1 | 200 | 0 |
| Lake Pat Cleburne | 38 | 25,300 | 22,910 | 91 | 2,620 | 10 | -530 | -2 |
| Whitney Lake | 39 | 622,800 | 476,970 | 77 | 31,990 | 5 | 6,750 | 1 |
| Waco Lake | 40 | 144,500 | 144,500 | 100 | 0 | 0 | 0 | 0 |
| Proctor Lake | 41 | 55,590 | 48,810 | 88 | 1,530 | 3 | -6,780 | -12 |
| Belton Lake | 42 | 434,500 | 434,500 | 100 | 0 | 0 | 0 | 0 |
| Stillhouse Hollow Lake | 43 | 226,060 | 226,060 | 100 | 3,860 | 2 | 0 | 0 |
| Lake Georgetown | 44 | 37,010 | 22,050 | 60 | 250 | 1 | -14,960 | -40 |
| Granger Lake | 45 | 54,280 | 54,280 | 100 | 4,950 | 9 | 0 | 0 |
| Lake Limestone | 46 | 215,750 | 215,750 | 100 | 14,300 | 7 | 0 | 0 |
| Lake Brownwood | 47 | 143,400 | 127,690 | 89 | 1,590 | 1 | -4,850 | -3 |
| TOTAL | | 11,908,050 | 9,982,410 | 84 | 314,490 | 3 | -788,310 | -7 |

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

| Name of Lake or Reservoir | No. on Map | Conservation | Conservation | | Change since | | Change since | | |
|---|------------------|------------------------------------|--|-----|---|--|--------------|-----|--|
| | | Storage Capacity (acre-feet) | Storage Late Feb. 2004 (acre-feet) (%) | | Late January 2004 (acre-feet) (%) | Late February 2003 (acre-feet) (%) | | | |
| EAST | | | | | | | | | |
| Wright Patman Lake | 48 | 142,700 | 142,700 | 100 | 0 | 0 | 0 | 0 | |
| Lake Cypress Springs | 49 | 66,800 | 66,800 | 100 | 2,700 | 4 | 0 | 0 | |
| Lake Bob Sandlin | 50 | 202,300 | 197,300 | 98 | 17,200 | 9 | -5,000 | -2 | |
| Lake O' the Pines | 51 | 252,000 | 251,000 | 100 | 20,200 | 8 | -1,000 | 0 | |
| Lake Fork Reservoir | 52 | 635,200 | 630,700 | 99 | 20,800 | 3 | -4,500 | -1 | |
| Toledo Bend Reservoir | 53 | 4,472,900 | 4,472,900 | 100 | 500,900 | 11 | 0 | 0 | |
| Lake Palestine | 54 | 411,300 | 411,300 | 100 | 24,350 | 6 | 0 | 0 | |
| Lake Tyler | 55 | 73,700 | 73,700 | 100 | 4,710 | 6 | 0 | 0 | |
| Sam Rayburn Reservoir | 56 | 2,876,300 | 2,876,300 | 100 | 305,920 | 11 | 0 | 0 | |
| B. A. Steinhagen Lake | 57 | 94,200 | 84,130 | 89 | -2,590 | -3 | -5,450 | -6 | |
| Cedar Creek Reservoir | 58 | 637,050 | 575,700 | 90 | 29,800 | 5 | -61,350 | -10 | |
| Lake Livingston | 59 | 1,750,000 | 1,750,000 | 100 | 0 | 0 | 0 | 0 | |
| Lake Conroe | 60 | 429,900 | 420,100 | 98 | -400 | 0 | 5,400 | 1 | |
| TOTAL | | 12,044,350 | 11,952,630 | 99 | 923,590 | 8 | -71,900 | -1 | |
| TRANS-PECOS | | | | | | | | | |
| Red Bluff Reservoir | 61 | 307,000 | 56,390 | 18 | 1,470 | 0 | -3,360 | -1 | |
| TOTAL | | 307,000 | 56,390 | 18 | 1,470 | 0 | -3,360 | -1 | |
| EDWARDS PLATEAU | | | | | | | | | |
| E. V. Spence Reservoir | 62 | 488,760 | 42,660 | 9 | -1,260 | 0 | 2,860 | 1 | |
| Twin Buttes Reservoir | 63 | 177,800 | 4,840 | 3 | 330 | 0 | -1,060 | -1 | |
| O.C. Fisher Lake | 64 | 119,200 | 2,890 | 2 | -40 | 0 | -400 | 0 | |
| O. H. Ivie Reservoir | 65 | 554,340 | 192,470 | 35 | -550 | 0 | -15,630 | -3 | |
| Lake Buchanan | 66 | 896,980 | 816,440 | 91 | 4,230 | 0 | -69,640 | -8 | |
| Amistad Reservoir (Texas) | 67 | 1,771,030 | 1,433,000 | 81 | 18,000 | 1 | 486,000 | 27 | |
| Amistad Reservoir (Texas and Mexico) | (67) | 3,151,300 | 1,583,000 | 50 | 21,000 | 1 | 491,000 | 16 | |
| TOTAL | | 4,008,110 | 2,492,300 | 62 | 20,710 | 1 | 402,130 | 10 | |
| SOUTH CENTRAL | | | | | | | | | |
| Somerville Lake | 68 | 155,060 | 155,060 | 100 | 0 | 0 | 0 | 0 | |
| Lake Travis | 69 | 1,144,100 | 988,170 | 86 | 6,440 | 1 | -155,930 | -14 | |
| Canyon Lake | 70 | 385,600 | 378,610 | 98 | -1,230 | 0 | -6,990 | -2 | |
| Coletto Creek Reservoir | 71 | 35,060 | 31,900 | 91 | -80 | 0 | 240 | 1 | |
| Medina Lake | 72 | 254,000 | 223,500 | 88 | 3,600 | 1 | -30,500 | -12 | |
| TOTAL | | 1,973,820 | 1,777,240 | 90 | 8,730 | 0 | -193,180 | -10 | |
| UPPER COAST | | | | | | | | | |
| Lake Houston | 73 | 128,860 | 128,860 | 100 | 0 | 0 | 0 | 0 | |
| Lake Texana | 74 | 157,900 | 156,250 | 99 | -920 | -1 | -1,130 | -1 | |
| TOTAL | | 286,760 | 285,110 | 99 | -920 | 0 | -1,130 | 0 | |

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

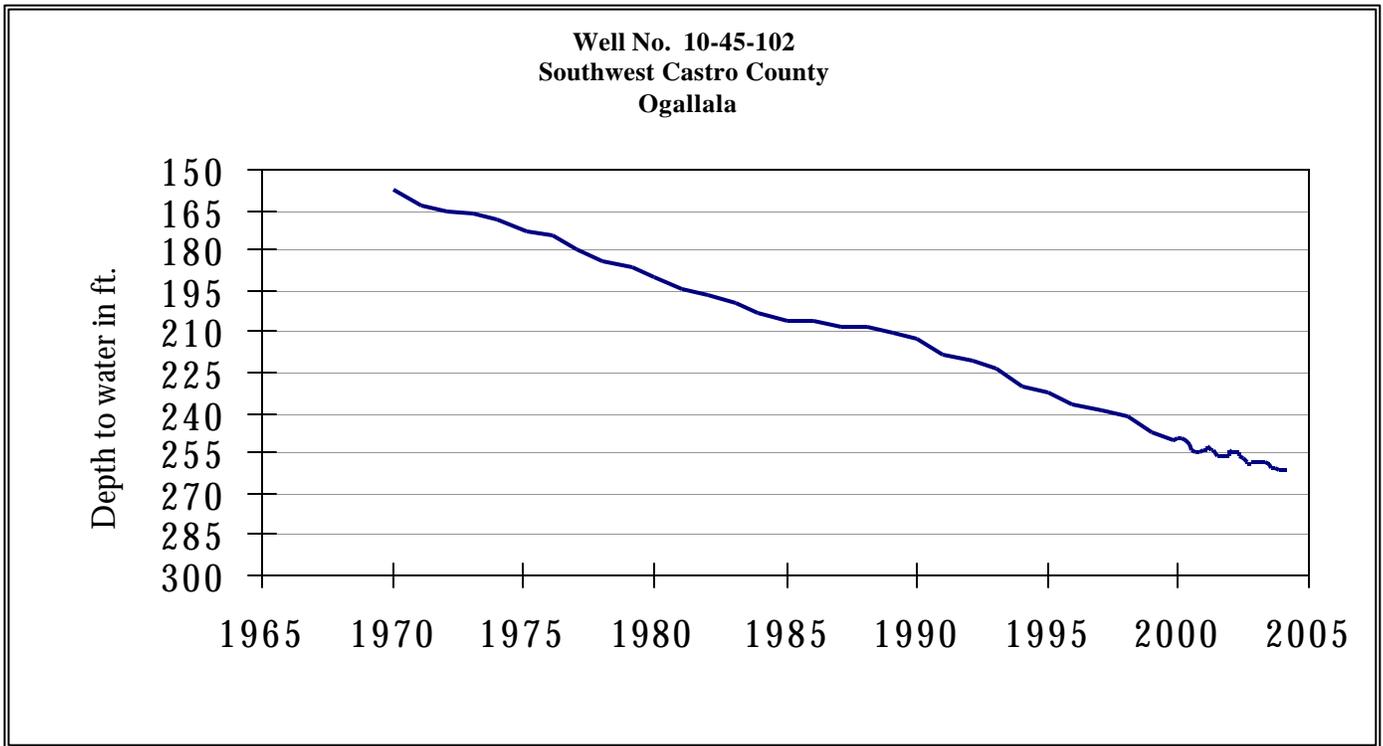
| Name of Lake or Reservoir | No. on Map | Conservation Storage Capacity (acre-feet) | Conservation Storage Late Feb. 2004 (acre-feet) (%) | | Change since Late January 2004 (acre-feet) (%) | | Change since Late February 2003 (acre-feet) (%) | | |
|--|------------------|--|--|-----|---|---|--|----|--|
| SOUTHERN | | | | | | | | | |
| Choke Canyon Reservoir | 75 | 695,260 | 684,000 | 98 | 2,000 | 0 | -9,000 | -1 | |
| Lake Corpus Christi | 76 | 241,240 | 240,500 | 100 | 1,600 | 1 | -740 | 0 | |
| Falcon Reservoir (Texas) | 77 | 1,555,120 | 492,000 | 32 | 2,000 | 0 | 114,000 | 7 | |
| Falcon Reservoir (Texas and Mexico) | (77) | 2,653,290 | 1,152,000 | 43 | 9,000 | 0 | 425,000 | 16 | |
| TOTAL | | 2,491,620 | 1,416,500 | 57 | 5,600 | 0 | 104,260 | 4 | |
| STATE TOTAL | | 34,470,430 | 28,429,120 | 82 | 1,279,570 | 4 | -692,010 | -2 | |

Note:

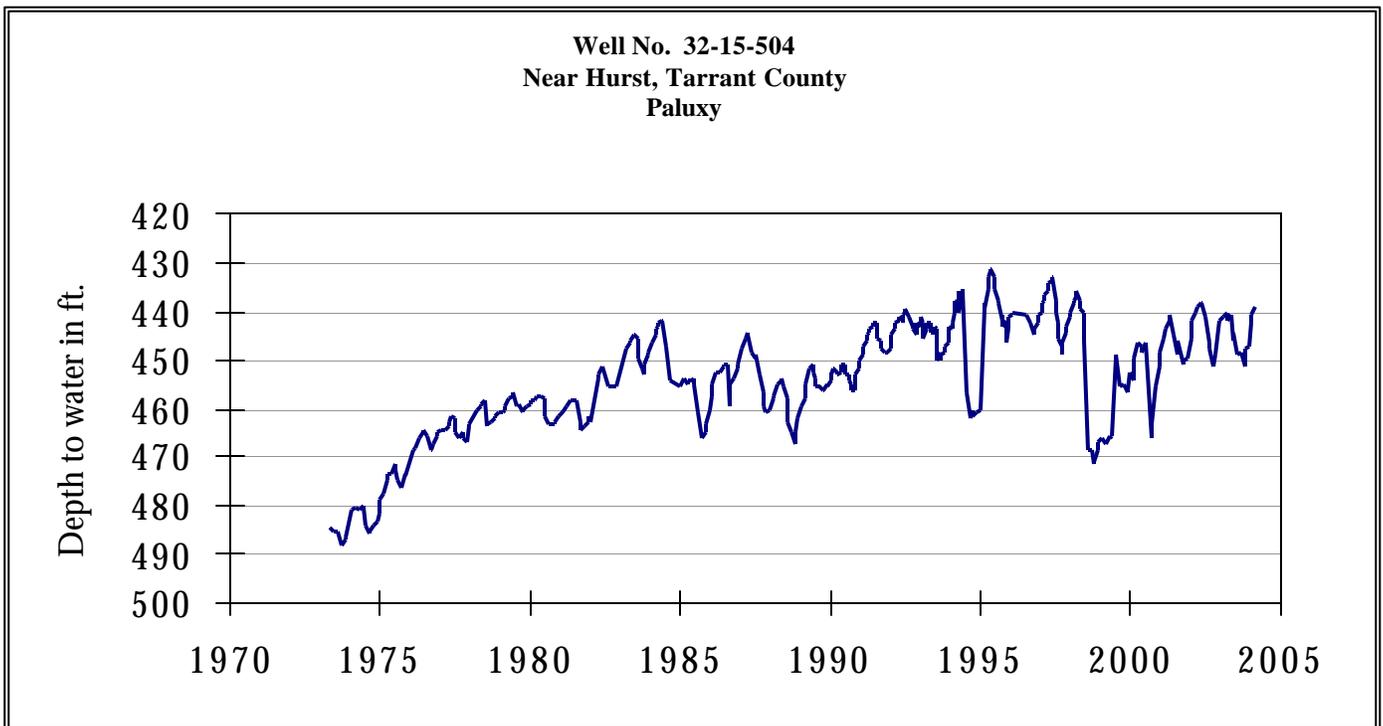
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included is any water in flood control storage (above the top of conservation pool or normal maximum operating level), or any water in so called dead storage (in the bottom of the reservoir, below the invert of lowest outlet works and consequently not removable by gravity flow alone.) Percentage of conservation storage is based on the conservation storage capacity of the reservoir and the conservation storage in the reservoir for date shown. Percent change is given by % Change = 100 * (current conservation storage - past conservation storage)/conservation storage capacity.

Current data are based on elevations near end of month at 77 reservoirs that together represent 98 percent of the total conservation storage capacity of major Texas reservoirs (those with capacity of 5,000 acre-feet or more each). Preliminary figures are shown for the Texas' share of conservation storage in all reservoirs.

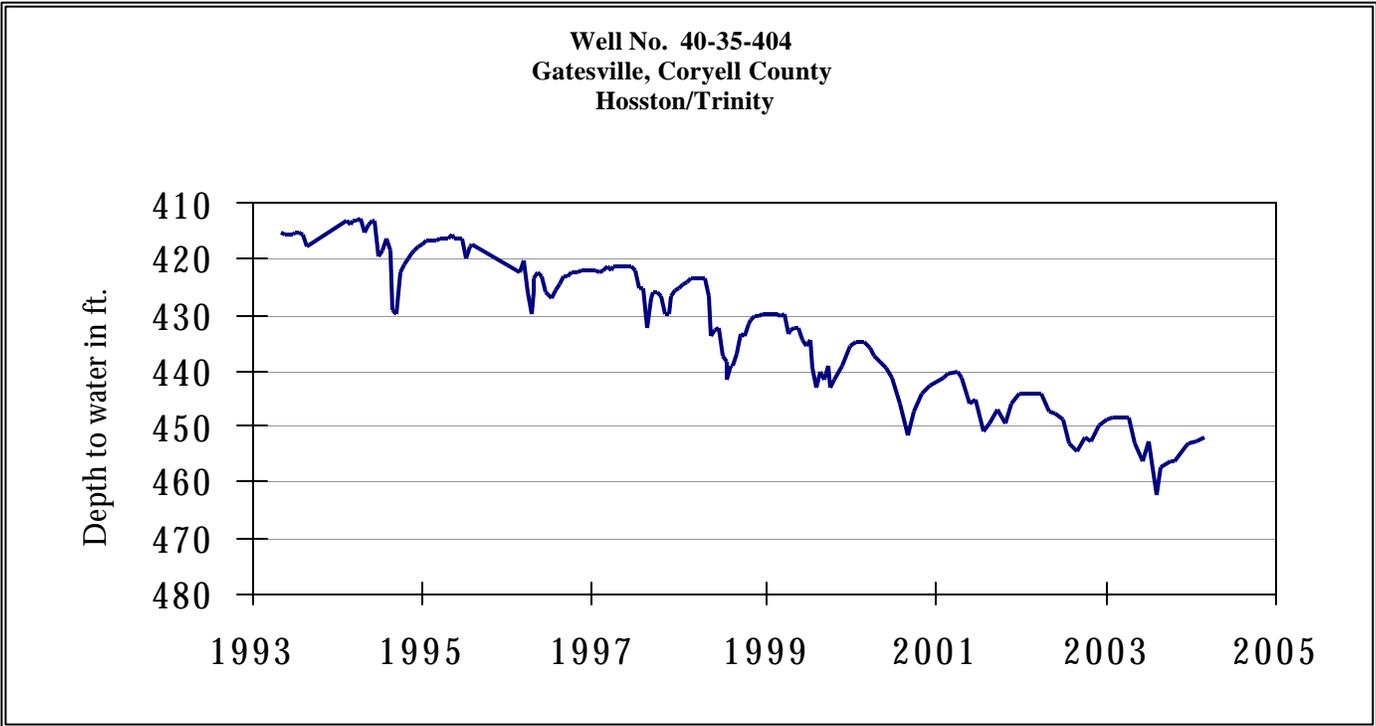
FEBRUARY GROUND WATER LEVELS IN OBSERVATION WELLS



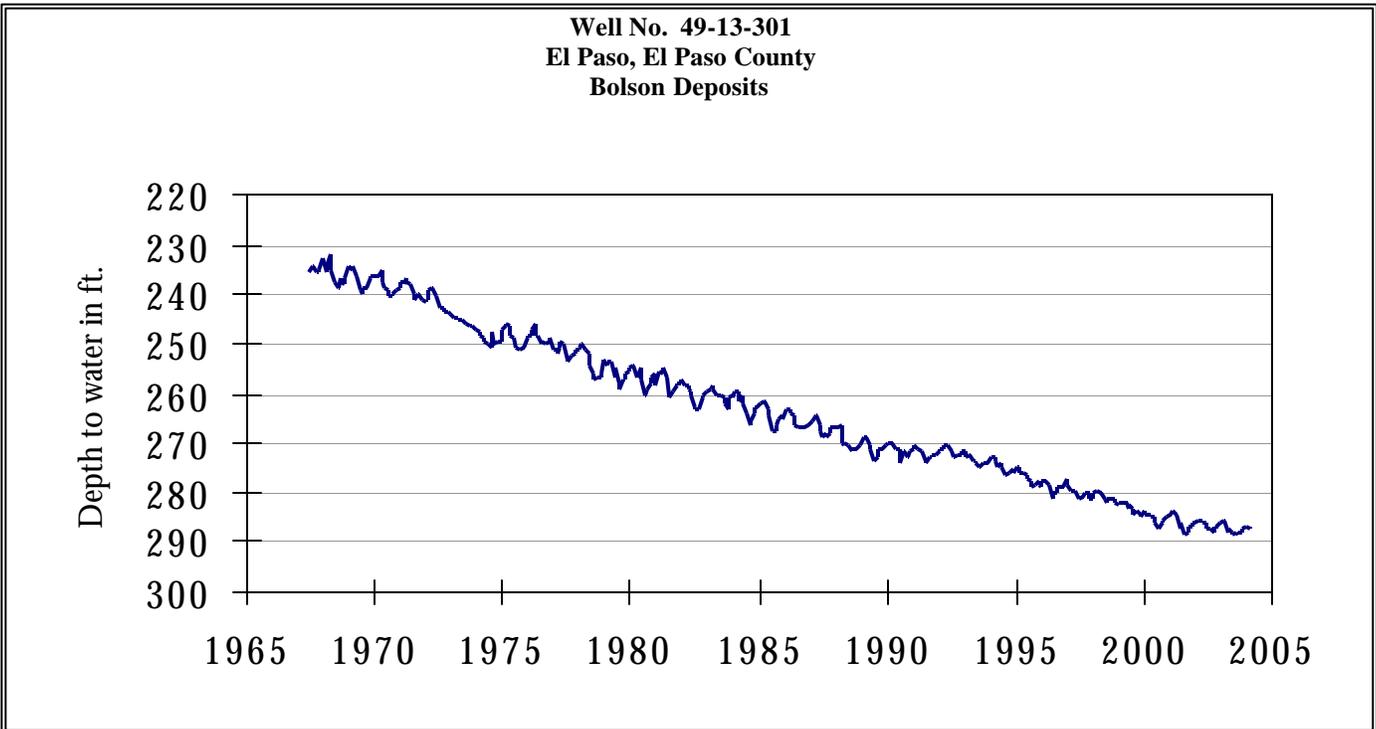
The late February water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 260.97 feet below land surface. This measurement was 0.03 foot above last month's measurement, 3.32 feet below last year's measurement, and 104.97 feet below the initial measurement recorded in 1968.



The late February water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 438.75 feet below land surface. This measurement was 1.98 feet above last month's measurement, 1.30 feet above last year's measurement, and 45.36 feet below the initial measurement recorded in 1953.

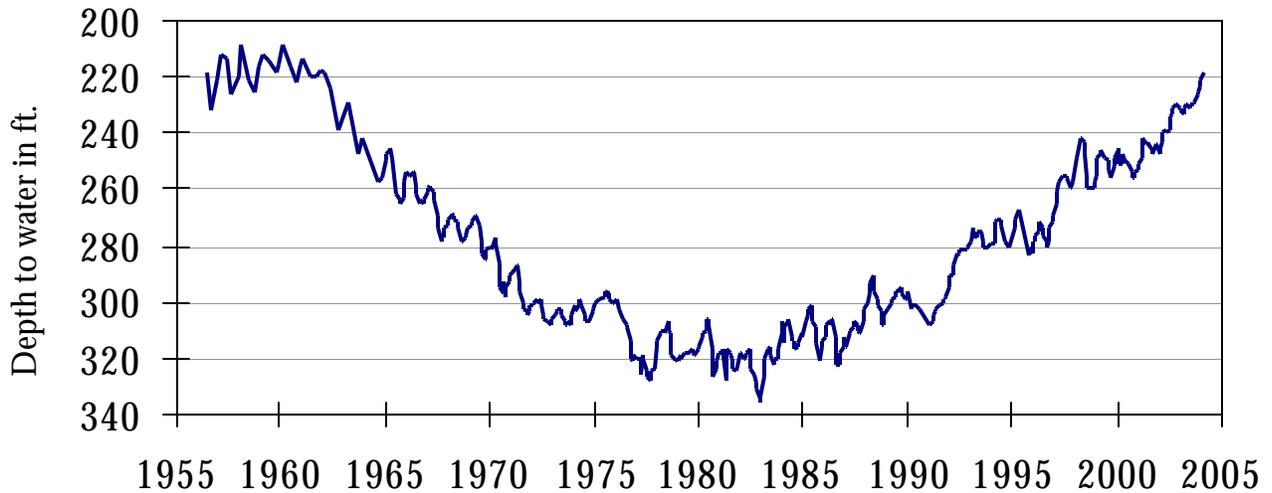


The late February water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 451.85 feet below land surface. This measurement was 0.46 foot above last month's measurement, 3.47 feet below last year's measurement, and 151.85 feet below the initial measurement recorded in 1955.



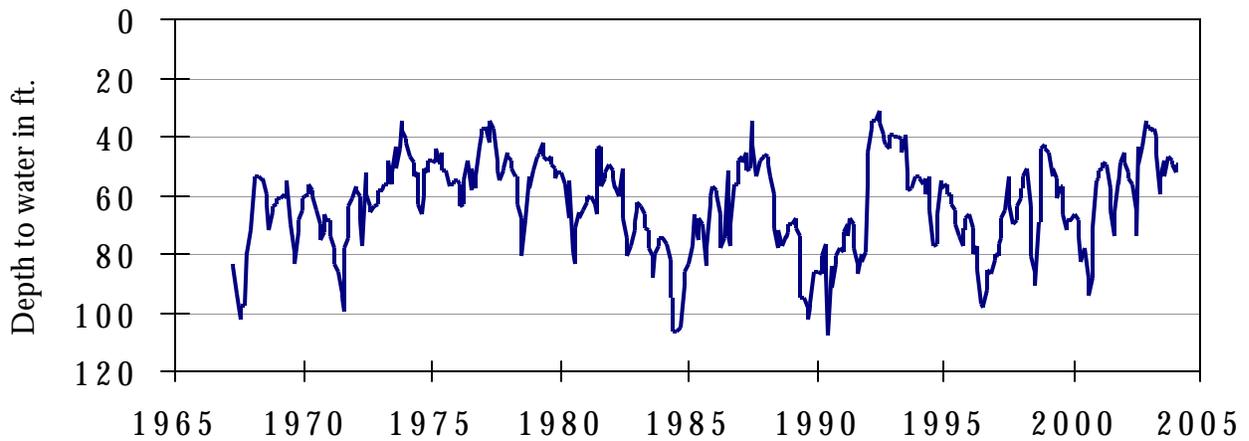
The late February water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 286.79 feet below land surface. This was 0.31 foot above last month's measurement, 0.96 foot below last year's measurement, and 54.89 feet below the initial measurement recorded in 1964.

**Well No. 65-14-409
Alief, Harris County
Evangeline**



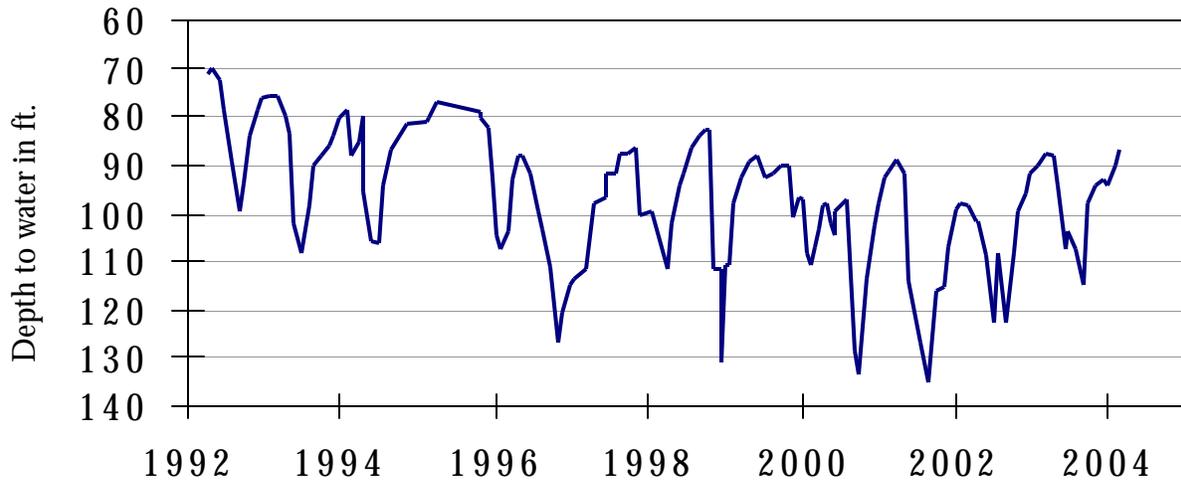
The late February water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 218.87 feet below land surface. This was 2.39 feet above last month's measurement, 14.36 feet above last year's measurement, and 115.64 feet below the initial measurement recorded in 1947.

**Well No. 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards and Associated Limestones**



The late February water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 50.02 feet below land surface. This was 0.18 foot above last month's measurement, 12.49 feet below last year's measurement, and 9.60 feet above the initial measurement recorded in 1962.

**Well No. 68-60-912
Between Poteet and Pleasanton, Atascosa County
Carrizo**



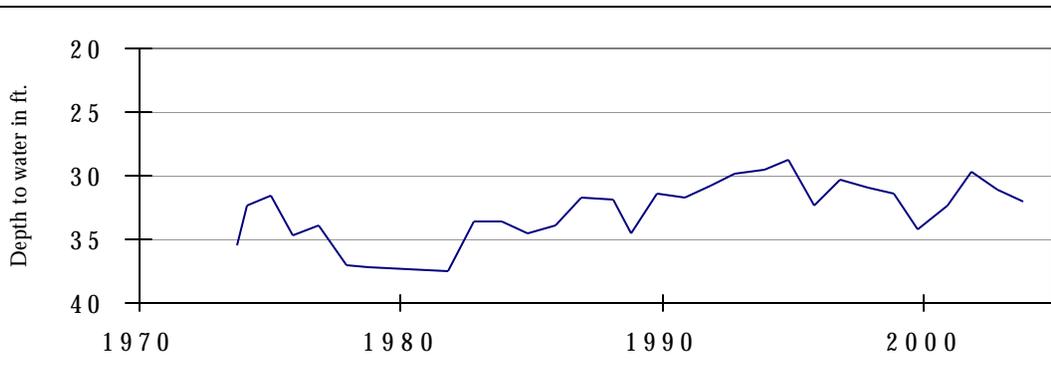
The late February water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 87.23 feet below land surface. This measurement was 2.89 feet above last month's measurement, 0.60 foot above last year's measurement, and 5.89 feet below the initial measurement recorded in 1965.

HYDROGRAPH OF THE MONTH



Each month this space features a new hydrograph (marked with the • symbol on the map) depicting different aquifers and different conditions in Texas.

**Well No. 16-28-902
Bowie County**



This 200 ft. domestic observation well, located twenty-eight miles east of Texarkana near the town of De Kelb at an elevation of 352 feet above sea level, was completed in the Nacatoch Aquifer. Pumpage from the aquifer is used mostly for municipal purposes, however a significant amount is used for rural domestic and livestock activities. Water level declines have stabilized with the increased use of local surface water resources.

February 29, 2004

Water levels increased in all seven key monitoring wells since the beginning of February, ranging from 0.03 foot in the Castro County (Ogallala Aquifer) well to 2.89 feet in the Atascosa County (Carrizo Aquifer) well.

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